

SRS document for Credit Card processing system:

1. Introduction:

- 1.1 Purpose of the requirement document: to specify the software requirements for Credit Card processing.
- 1.2 Scope of the product: allows customers to make payments credit card at various merchant locations. The system handles the authorization, capture and payment of transactions.
- 1.3 Definitions, acronyms and abbreviations:
 - POS: Point of Sale
 - API: Application Programming Interface
 - CVV: Card Verification Value
 - EMV: Europay, MasterCard and Visa
 - PCI-DSS: Payment Card Industry - Data Security Standard
- 1.4 Reference: PayPal, Visa & MasterCard merchant guidelines
- 1.5 Overview: The document includes functional, non-functional aspects, constraints & domain specific features. It also describes the processes of transaction, initiation, validation, authorization & settlement.

2. General Description:

- 2.1 Product perspective: The system interacts with both external banking network and internal systems for merchants. The system will integrate with POS devices, mobile payment gateways & online e-commerce platforms:
 - Bank perspective: interface with bank & card network to authorize transactions check for fraud

and ensure funds are available.

- Merchant perspective: they will use the system to process credit card payments.
- Customer perspective: they will use the system to make payments securely using credit card and receive real-time authorization response & view their transaction status.

2.2 Product function: transaction authorization, transaction capture, transaction settlement, fraud detection, chargeback management, refund processing.

2.3 User Characteristics:

- Merchants are business owners or staff processing payments at physical or online stores.
- Customers are individual making credit card payments.
- Banks are financial institute that authorize transactions & provide merchant services.

2.4 General characteristics:

- must comply with PCI-DSS standards for data security.
- System should support all major card types.
- Transaction above Rs 5000/- need additional authorization checks.

2.5 Assumptions and dependencies:

- merchant will ensure that customer input correct payment details.
- System assumes constant connectivity with banks and card network for real time authorization.

3. Specific Requirements:

3.1 Functional requirements:

- Transaction authorization: validate card number, expiration date, CUV, address ~~exists~~ enough funds are there ~~for~~ for transaction. Provide real-time response to merchant and customer.
- Fraud detection: cross check transactions for unusual patterns based on user history.
- Chargeback handling: automatically reverse payments when disputes are resolved in favor of the customer.
- refund management: enable partial & full refunds for authorized transactions.

3.2 Non-Functional requirements:

- Security: must comply with PCI-DSS standards to ensure data protection.
- Performance: System should handle up to 500 transactions per second during peak times & avg. response time for authorization should be less than 2 seconds.
- Reliability: system uptime should be 99.9% with fail over mechanism in place.

3.3 Domain requirements

- responsive user interface for mobile & desktop users.
- inventory management

- Support multiple payments gateways

~~6. Appendices~~

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8. Design Constraints:

8.1 Platform: The system will be developed as a web-based solution.

8.2 Database: A secure, scalable SQL-based will store applications and user data.

8.3 Security Constraints: Strict security protocols must be followed.

9. Preliminary Schedule & Budget

9.1 Development Time: 6 months Estimated

9.2 Budget: Estimated development cost is 100,000 covering design, development and testing.

RS - 10,000

DD - 50,000

US - 20,000

SE - 20,000